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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/574,338

05/08/2006

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EXAMINER

XU, XIAOYUN

ART UNIT

PAPER NUMBER

1797

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/574,338	Applicant(s) EHRET ET AL.	
	Examiner ROBERT XU	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 1-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/29/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Preliminary amendment filed on 03/29/2006 is acknowledged. Claims 1-16 are canceled. Claims 17-33 are pending and have been fully considered.

Claim Rejections - 35 USC § 112

2. Claims 27, 29 and 31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The examiner respectfully reminds the Applicants that according to MPEP §2163:

“2163.02. Standard for Determining Compliance with Written Description Requirement:

The courts have described the essential question to be addressed in a description requirement issue in a variety of ways. An objective standard for determining compliance with the written description requirement is, “does the description clearly allow persons of ordinary skill in the art to recognize that he or she invented what is claimed.” *In re Gosteli*, 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989). Under *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991), to satisfy the written description requirement, an applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention, and that the invention, in that context, is whatever is now claimed. The test for sufficiency of support in a parent application is whether the disclosure of the application relied upon “reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter.” *Ralston Purina Co. v. Far-Mar-Co., Inc.*, 772 F.2d 1570, 1575, 227 USPQ 177, 179 (Fed. Cir. 1985) (quoting *In re Kaslow*, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983)). Whenever the issue arises, the fundamental factual inquiry is whether the specification conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, applicant was in possession of the invention as now claimed. See, e.g., *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991). An applicant shows possession of the claimed invention by describing the claimed invention with all of its limitations using such descriptive means as words, structures, figures, diagrams, and formulas that fully set forth the claimed invention. *Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1966 (Fed. Cir. 1997). Possession may be shown in a variety of ways including description of

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an actual reduction to practice, or by showing that the invention was “ready for patenting” such as by the disclosure of drawings or structural chemical formulas that show that the invention was complete, or by describing distinguishing identifying characteristics sufficient to show that the applicant was in possession of the claimed invention. See, e.g., *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 68, 119 S.Ct. 304, 312, 48 USPQ2d 1641, 1647 (1998); *Regents of the University of California v. Eli Lilly*, 119 F.3d 1559, 1568, 43 USPQ2d 1398, 1406 (Fed. Cir. 1997); *Amgen, Inc. v. Chugai Pharmaceutical*, 927 F.2d 1200, 1206, 18 USPQ2d 1016, 1021 (Fed. Cir. 1991) (one must define a compound by “whatever characteristics sufficiently distinguish it”).

The applicants described that the second conduit and the second channel for communicating between the outside of the receptacle and the interior of the receptacle for supplying liquid to the receptacle, the second conduit having a lower extremity above a predetermined upper level of the body of liquid where liquid supplied through the second conduit drips or flows into the body of liquid from above the body of liquid (see instant Claim 25, channel 6 in Figure 1). The applicants did not describe the second channel (for supplying liquid) extends through the carrier portion and the head portion of the member to communicate with the reaction chamber in the specification “using such descriptive means as words, structures, figures, diagrams, and formulas that fully set forth the claimed invention”, and thus they did not reasonably convey those skilled in the art that they possessed the invention as recited in claim 27 at the filing date of the invention. Since Claims 29 and 30 depend on Claim 27, they are also subject to the same rejection.

3. Claims 27, 29 and 31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The applicants described that the second conduit and the second channel for communicating between the outside the receptacle and the interior of the receptacle for supplying liquid to the receptacle, the second conduit having a lower extremity above a predetermined upper level of the body of liquid where liquid supplied through the second conduit drips or flows into the body of liquid from above the body of liquid (see instant Claim 25, channel 6 in Figure 1). The applicant also described that the head portion of the member formed an upper wall of the reaction chamber (see instant claim

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25 and Figure 1). The applicants did not describe the second channel (for supplying liquid) extends through the carrier portion and the head portion of the member to communicate with the reaction chamber in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention as recited in claim 27. Since Claims 29 and 30 depend on Claim 27, they are also subject to the same rejection.

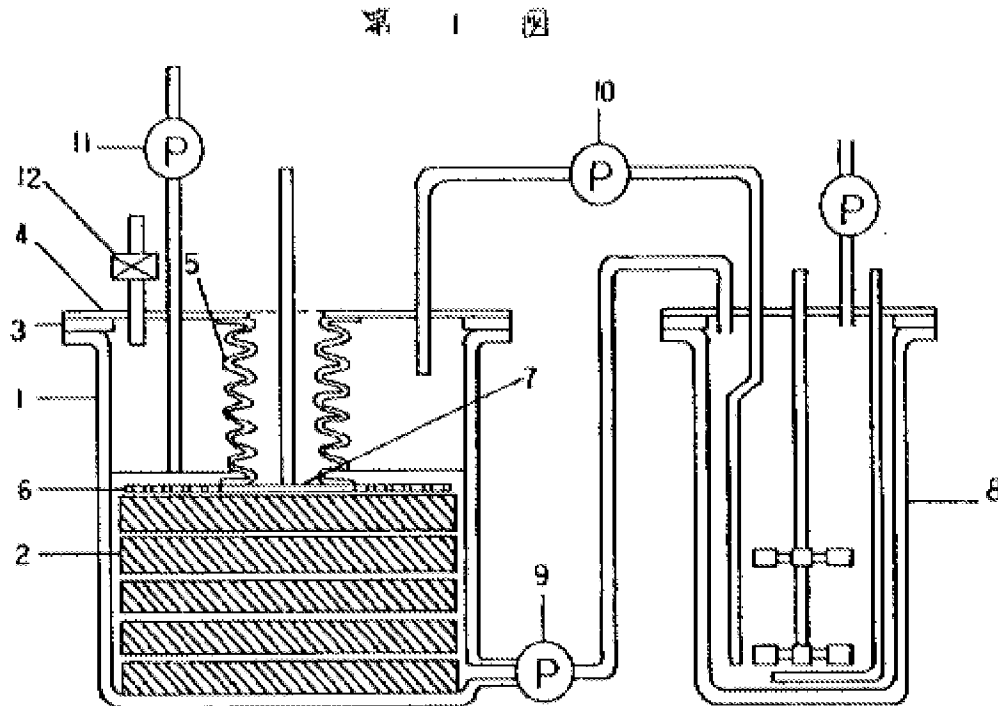
Claim Rejections – 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 17 and 25** are rejected under 35 U.S.C. 102(b) as being anticipated by Seisakusho et al. (JP 63 036783) (Seisakusho).



In regard to Claim 17, Seisakusho teaches a method of providing a body of liquid having an exposed upper surface in a receptacle (1) including a reaction chamber (see Figure 1). The method comprises

inserting a member (4-7) into the vessel (1), the member comprising a head portion (6-7) forming an upper wall of the reaction chamber (see Figure 1),

supplying the liquid to the receptacle by causing the liquid to drip or flow into the receptacle from a conduit (10) at a location above the surface of the body of the liquid (see Figure 1),

providing a conduit (9) communicating with the body of the liquid from outside the receptacle (see Figure 1),

applying suctions to the conduit (9) to withdraw the liquid from the body of the liquid (see Figure 1), and

regulating height of the exposed surface by regulating the supplying and withdrawing of the liquid (see Figure 1).

Since Seisakusho teaches a method of providing a body of liquid in a reaction chamber, allowing monitoring conditions in the liquid is inherently taught.

In regard to Claim 25, Seisakusho discloses an apparatus comprising a receptacle (1) including a reaction chamber and means for supplying the receptacle with body of liquid having an exposed upper surface, the means for supplying comprising, a member (4-7) for insertion into the receptacle and comprising, at lower extremity, a head portion for forming an upper wall (6-7) of the reaction chamber (see Figure 1),

a first conduit (9) for communicating between outside the receptacle and the body of liquid by suctioning liquid away from the body of liquid (see Figure 1), and

a second conduit (10) for communicating between outside the receptacle and the interior of the receptacle for supplying liquid to the receptacle (see Figure 1), the second conduit having a lower extremity above a predetermined upper level of the body of liquid whereby liquid supplied through the second conduit drips or flows into the body of liquid from above the body of liquid (see Figure 1).

Since Seisakusho discloses a reaction apparatus, the apparatus being adapted for monitoring of condition is inherently taught.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. **Claims 18-24, 26-31 and 33** are rejected under 35 U.S.C. 103(a) as being unpatentable over Seisakusho.

In regard to Claims 18 and 26, Seisakusho does not teach that both conduits comprise channels formed through the member. Seisakusho teaches that the liquid supplying conduit (10) comprises channel formed through the member (4) (see Figure 1). Whether the channel of liquid withdrawing conduit (9) formed through the member or not is merely an obvious matter of design choice and would not have modified the operation of the device. Therefore, it would have been obvious to one of ordinary skill in the art to have the channel of liquid withdrawing conduit go through the member (4-7) as long as the entrance of the channel is below the level of the liquid body as taught by Seisakusho in Figure 1.

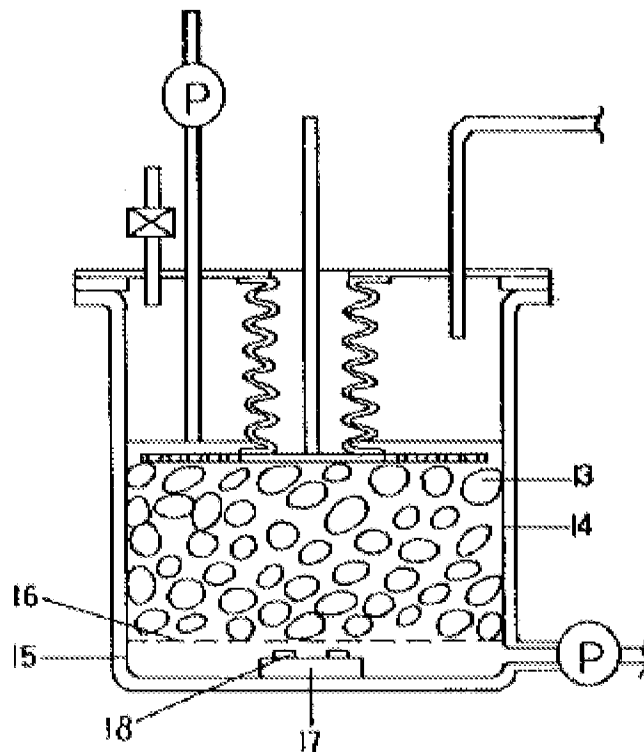
In regard to Claims 19 and 31, Seisakusho teaches a third channel (12) through the member (4) (see Figure 1), and applying suction to the third channel to withdraw liquid from the body of the liquid to assist in the regulation of the height of the exposed surface.

In regard to Claim 20, Seisakusho teaches that the reaction chamber contains living cells, cell components, DNA, RNA, and chemical/biochemical reactions are conducted there (see abstract).

In regard to Claims 21 and 22, it seems obvious that the supplying and withdrawing of the liquid in Seisakusho's device can be continuous or discontinuous (see Figure 1).

In regard to Claim 23, Seisakusho teaches that the exposed surface is above the location of the reaction chamber wall (see figure 1). It seems obvious that when lifting the member in Seisakusho's device, a portion of the body of the liquid which had been above the reaction chamber wall will mix into the reaction chamber liquid (see Figure 1).

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In regard to Claim 24, Seisakusho teaches that the device has a membrane (16) in the reaction chamber to subdivide the reaction chamber into a portion into which the liquid being supplied directly flows (14) and a portion into which the liquid being supplied does not directly flow (15) (see Figure 2).

In regard to Claim 28, Seisakusho discloses that the receptacle comprises a bottom and the receptacle bottom forms a bottom of the reaction chamber (see Figure 1). Seisakusho does not disclose that the first conduit comprises a channel through the bottom of the receptacle. Seisakusho discloses that the first conduit (9) comprises a channel through the lower side closing to the bottom of the receptacle (see Figure 1). Whether the channel of liquid withdrawing conduit (9) through the bottom of the reaction chamber or through side closing to the bottom of the chamber is merely an obvious matter of design choice and would not have modified the operation of the device.

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Therefore, it would have been obvious to one of ordinary skill in the art to have the channel of liquid withdrawing conduit go through the bottom as long as the entrance of the channel is below the level of the liquid body as taught by Seisakusho in Figure 1.

In regard to Claim 30, Seisakusho does not disclose that the second conduit (for supplying liquid) comprises a channel through a side wall of the receptacle and being adjacent the member. Seisakusho discloses that the second conduit (10 for supplying liquid) comprises a channel through the member (4) (see Figure 1). Whether the channel of liquid supplying conduit (10) through a side wall of the receptacle or through the member above the surface is merely an obvious matter of design choice and would not have modified the operation of the device. Therefore, it would have been obvious to one of ordinary skill in the art to have the channel of liquid supplying conduit go through the side wall of the receptacle as long as the entrance of the channel is above the level of the liquid body as taught by Seisakusho in Figure 1.

In regard to Claim 33, Seisakusho discloses that a sensor (11) in the reaction chamber for monitoring conditions in the liquid (see Figure 1)

9. **Claim 32** is rejected under 35 U.S.C. 103(a) as being unpatentable over Seisakusho in view of Lin (US Patent 6,017,483).

In regard to Claim 32, Seisakusho does not disclose one of hydrophilic or hydrophobic coatings on surface of the apparatus. However, having one of hydrophilic or hydrophobic coatings on surface of the apparatus is known in the art. For example, Lin discloses having hydrophilic coating on an interior surface of a receptacle to prevent sample from sticking on the wall (see abstract, Col. 1, lines 32-50). At time of the invention it would have been obvious to one of ordinary skill in the art to have one of hydrophilic or hydrophobic coatings on the surface of the apparatus so that the chemicals in the reaction chamber would not stick on the wall.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT XU whose telephone number is (571)270-

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5560. The examiner can normally be reached on Mon-Thur 7:30am-5:00pm, Fri 7:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571)272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

2/12/2009

/Yelena G. Gakh/
Primary Examiner, Art Unit 1797

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